

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in this application:

Listing of Claims:

1-6. (Cancelled)

7. (Currently amended) A method of forming a relational database from an Extensible Markup Language (XML) document formed of a plurality of nodes, the method comprising:

assigning an identifier to every node of the XML document, wherein the identifier identifies the XML document against another XML document;

assigning a respective sequence identifier to each node of the XML document; wherein said respective sequence identifiers identify an order of the nodes in the XML document; and,

converting each node of the XML document into a respective row of the relational database.

8. (Previously presented) The method according to Claim 7 wherein said converting comprises:

processing a prolog of the XML document if one is present;

subsequent to the processing the prolog, processing a body of the XML document; and,

subsequent to processing the body, processing an epilog of the XML document if one is present.

9. (Previously presented) The method according to Claim 8 wherein:

processing the prolog includes:

retrieving a node from the prolog;

determining a type for the node;

subsequent to a determination that the node type is a processing instruction:

determining a target for the node;

determining an instruction for the node; and,

creating a row of the relational database that includes the identifier, the sequence identifier for the node, an XML document name, the target, the node type, and the instruction; and,

subsequent to a determination that the node type is a comment:

determining the comment; and,

creating a row of the relational database that includes the identifier, the sequence identifier for the node, an XML document name, the comment, and the node type.

10. (Previously presented) The method according to Claim 9 further including incrementing the sequence identifier subsequent to creating the row of the relational database and repeating.

11. (Previously presented) The method according to Claim 8 wherein:

processing the epilog includes:

retrieving a node from the epilog;

determining a type for the node;

subsequent to a determination that the node type is a processing

instruction:

determining a target for the node;

determining an instruction for the node; and,

creating a row of the relational database that includes the identifier, the

sequence identifier for the node, an XML document name, the target, the node type, and

the instruction; and,

subsequent to a determination that the node type is a comment:

determining the comment; and,

creating a row of the relational database that includes the identifier, the

sequence identifier for the node, an XML document name, the comment, and the node

type.

12. (Previously presented) The method according to Claim 11 further including incrementing the sequence identifier subsequent to creating the row of the relational database.

13. (Currently amended) The method according to Claim 8 wherein:

processing the body includes:

retrieving an XML element;

determining if the element is empty;

setting an empty element variable to a value based upon the determination;

~~and,~~

creating a row of the relational database that includes the identifier, the

sequence identifier for the node, and attributes of the element; and,

incrementing the sequence identifier subsequent to creating the row of the relational database.

14. (Previously presented) The method according to Claim 13 wherein the attributes of the element include:

an element name, an attribute type, and an attribute value.

15. (Previously presented) The method according to Claim 13 wherein the row further includes the value of the empty element variable, an ancestor and a parent.

16. (Currently amended) The method according to Claim 13 further comprising:

retrieving another element;

determining a type for the another element;

subsequent to a determination that the element type is a processing

instruction:

determining a target for the element;
determining an instruction for the element; and,
creating a row of the relational database that includes the identifier, the sequence identifier for the node, and element name, the target, the element type, and the instruction;

subsequent to a determination that the element type is a comment:
determining text of the comment; and,
creating a row of the relational database that includes the identifier, the sequence identifier for the node, an element name, the comment, and the element type;
and

subsequent to a determination that the element type is a pcd data text:
determining how many times this element type has been encountered;
determining text of the pcd data text; and,
creating a row of the relational database that includes the identifier, the sequence identifier for the node, an element name, the element type, an indication of the number of times this element type has been encountered, and the text; and,

subsequent to a determination that the element type is a cdata text:
determining how many times this element type has been encountered;
determining text of the cdata text; and,
creating a row of the relational database that includes the identifier, the sequence identifier for the node, an element name, the element type, an indication of the number of times this element type has been encountered, and the text,

wherein the sequence identifier is incremented each time a row of the relational database is created.

17. (Currently amended) A method of forming a relational database from an Extensible Markup Language (XML) document formed of a plurality of nodes, the method comprising:

assigning an identifier to the XML document, wherein the identifier identifies the XML document against another XML document; and,
creating a row of the relational database that includes the identifier, and a content of one of the plurality of nodes.

18. (Currently amended) A relational database comprising:

a database that includes a row containing, content from a node of an Extensible Markup Language (XML) document;
wherein the row includes an XML document identifier that identifies the XML document against another XML document.

19. (Previously presented) The relational database according to Claim 18 wherein said content includes:

a sequence identifier for the node, an XML document name, a processing instruction, a target of the processing instruction, and a node type.

20. (Previously presented) The relational database according to Claim 18

wherein said content includes:

a sequence identifier for the node, an XML document name, a comment,
and a node type.

21. (Previously presented) The relational database according to Claim 18

wherein said content includes:

a sequence identifier for the node, and XML element attributes.

22. (Previously presented) The relational database according to Claim 21

wherein said element attributes include:

an element name, an attribute type, and an attribute value.

23. (Previously presented) The relational database according to Claim 18

wherein said content includes:

a sequence identifier for the node, an element name, an element type, an
indication of the number of times this element type has been encountered, and a text of
the element.

24. (Previously presented) The relational database according to Claim 23

wherein said element type is pcd data.

25. (Previously presented) The relational database according to Claim 23
wherein said element type is cdata.